



## Nature of Roots

Name \_\_\_\_\_

Score \_\_\_\_\_

RQ:23

For the quadratic equation  $ax^2 + bx + c = 0$ ,

If  $b^2 - 4ac > 0$ , then the roots are real and unequal.

If  $b^2 - 4ac = 0$ , then the roots are real and equal.

If  $b^2 - 4ac < 0$ , then the roots are unreal(complex).

Find the nature of roots for each quadratic equation.

1)  $x^2 + 8x + 16 = 0$

2)  $6n^2 - n - 9 = 0$

3)  $2t^2 - 4t + 5 = 0$

4)  $3h^2 + 6x = 0$

5)  $4z^2 - 4z + 1 = 0$

6)  $m^2 + m + 3 = 0$

7)  $8g^2 - 2g - 1 = 0$

8)  $y^2 + 4 = 0$



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## Answer key

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8)  $y^2 + 4 = 0$

**The roots are unreal.**